Hume Amendment C207 Sunbury South PSP

Expert Evidence – Traffic and Transport

V171123

Prepared for
HWL Ebsworth Lawyers

11 August 2017

Cardno
Shaping the Future

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F01	11/08/17	Chris Butler			

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1 Qualifications and Expertise

In accordance with the Guide to Expert Evidence prepared by Planning Panels Victoria, my qualifications and expertise to undertake this work are summarised below:-

Name:

Christopher James Butler

Address:

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Level 4, 501 Swanston Street

Melbourne Vic 3000

Professional Qualifications:

> Bachelor of Civil Engineering (Honours), University of Melbourne

Professional Experience:

> Cardno Victoria 2007 – Present

> Grogan Richards Pty Ltd 1988 – 2007

> Road Traffic Authority and RJ Nairn and Partners Pty Ltd 1985 - 1988

Areas of Expertise:

> Car parking, traffic and transportation.

> Traffic advice and assessment of land uses and development proposals in relation to shopping centre developments, both new and expansions, office developments, local government and government authorities, residential and recreational developments, hospitals, schools, retirement villages and aged care facilities.

> Preparation and presentation of evidence before VCAT and Planning Panels.

Expertise to Prepare this Report:

My training and experience including involvement with all forms of development over the past 31 years qualifies me to comment on the traffic implications of the proposal.

Instructions which Defined the Scope of this Report:

I have been retained by HWL Ebsworth on behalf of Capitol Property Group to provide expert evidence at the Panel Hearing for Amendment C207 to the Hume Planning Scheme.

My brief is to advise on the following matters:

> The priority of road and intersection related infrastructure set out in the *'Sunbury Infrastructure Co-Ordination & Delivery Strategy (Draft)'* report prepared by the VPA;

> The suitability of the Sunbury Road cross-section as shown in the exhibited documents;

> The position and design of the Sunbury Road / Lancefield Road intersection;

> Pre-interim and interim access arrangements to Sunbury Road, including the need to provide an access to the Francis Boulevard roundabout (not shown on Plan 9 of the Exhibited PSP);

> The alignment of the Boulevard Connector Street;

> Review the traffic modelling prepared by GTA Consultants and form an opinion on the performance of the road network 'before' and 'after' the southern bridge connection in the early stages of the development of the Sunbury South and Lancefield Road PSPs.

Facts, Matters and Assumptions Relied Upon:

> Hume Planning Scheme Amendment C207 documentation as exhibited

> Traffic Modelling prepared by GTA Consultants

> Alternative Sunbury Road cross-sections prepared by Mesh

> Submissions received on the amended documents

> Review of relevant correspondence and other application documents.

Identity of Persons Undertaking the Work:

Chris Butler, assisted by Benjamin Mentha (Senior Engineer) and William Drew (Traffic Engineer) of Cardno Victoria.

'I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.'

Chris Butler

Senior Principal

for **Cardno**

2 Introduction

Capitol Property Group represents the owners of 725 Sunbury Road, Sunbury.

I have been retained by HWL Ebsworth on behalf of Capitol Property Group to provide my opinion on the following matters:

> The priority of road and intersection related infrastructure set out in the *'Sunbury Infrastructure Co-Ordination & Delivery Strategy (Draft)'* report prepared by the VPA;

> The suitability of the Sunbury Road cross-section as shown in the exhibited documents;

> The position and design of the Sunbury Road / Lancefield Road intersection;

> Pre-interim and interim access arrangements to Sunbury Road, including the need to provide an access to the Francis Boulevard roundabout (not shown on Plan 9 of the Exhibited PSP);

> The alignment of the Boulevard Connector Street;

> Review the traffic modelling prepared by GTA Consultants and form an opinion on the performance of the road network 'before' and 'after' the southern bridge connection in the early stages of the development of the Sunbury South and Lancefield Road PSPs.

The following sets out my opinions with respect to these matters.

3 Background

3.1 Locality

The subject site is located within the Sunbury South Precinct (PSP 1074) within the Sunbury Growth Corridor.

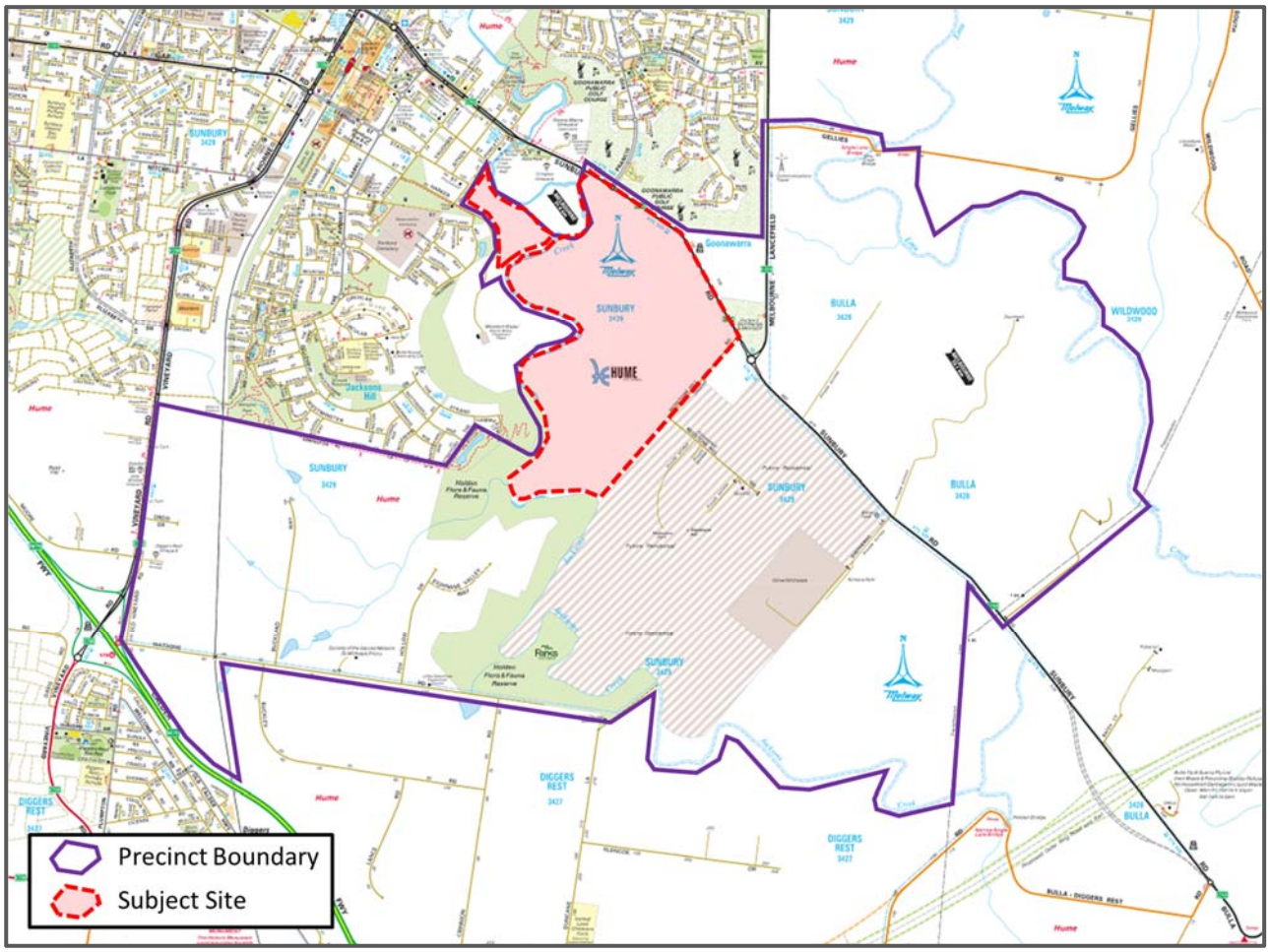
The site is addressed as 725 Sunbury Road, Sunbury and is comprised of a number of parcels, identified as Properties 52, 53, 55, 56, 57, 58 and 59 in the Sunbury South PSP Land Use Budget.

The site is irregularly shaped and generally bound by Sunbury Road along its north-east boundary, Jacksons Creek along its western boundary and Redstone Hill Road along its south-eastern boundary. Part of the site (known as the Harker Street Precinct) is located on the western side of Jacksons Creek.

The site is currently vacant and has been used for agricultural uses in the past. The Sunbury Town Centre is located approximately 2 km west of the site, with existing residential development located on the west side of Jacksons Creek and north of Sunbury Road.

The location of the subject site in the context of the Sunbury South PSP and broader Sunbury Township is shown in Figure 3-1.

Figure 3-1 Location of Subject Site



Source: Melway Online

3.2 Existing Road Network

3.2.1 Sunbury Road

Sunbury Road is a declared arterial road managed by VicRoads. It is generally aligned in a north-west to south-east direction and forms the continuation of the Tullamarine Freeway to the Sunbury Town Centre (Horne Street).

Within the Sunbury South PSP, Sunbury Road has a reservation of approximately 60m and is generally constructed with a single traffic lane in each direction, with localised widening on the approach and departure sides of the roundabout intersections at Francis Boulevard and Lancefield Road. A duplicated section (with painted median) is located in the south-eastern part of the PSP. Footpaths are not currently provided along Sunbury Road within the PSP area.

To the north-west of the PSP, a single traffic lane in each direction is provided across Jacksons Creek, with a duplicated carriageway provided between Horne Street and the bridge.

To the south-east of the PSP, a single traffic lane in each direction is provided across Deep Creek in Bulla, with two Melbourne-bound lanes and one Sunbury-bound lane through the Bulla Township.

3.2.2 Lancefield Road

Lancefield Road is a declared arterial road managed by VicRoads. It extends in a northern direction from Sunbury Road towards Lancefield where it continues to the Northern Highway in Tooborac.

In the vicinity of the Sunbury South PSP, Lancefield Road is generally constructed with a single lane in each direction. An additional lane is provided on the approach to the Sunbury Road roundabout.

3.2.3 Vineyard Road

Vineyard Road is a declared arterial road managed by VicRoads. It is generally aligned in a north-south direction from the Sunbury Town Centre to Diggers Rest.

On the northern side of the Calder Freeway, Vineyard Road is constructed with a duplicated cross-section providing two lanes in each direction.

Access to the Calder Freeway is provided by a full diamond interchange.

3.2.4 Gap Road

Gap Road is a declared arterial road managed by VicRoads. It extends in a western direction for approximately 4.3km from Vineyard Road in the Sunbury Town Centre to the Calder Freeway.

It is generally constructed with a single carriageway providing a single traffic lane in each direction.

Access to the Calder Freeway is provided by a full diamond interchange.

3.2.5 Francis Boulevard

Francis Boulevard is classified as a collector road in Hume City Council's Register of Public Roads. It extends in a northern direction from Sunbury Road through the Goonawarra residential area, where it continues as Curtis Avenue.

On the approach to the Sunbury Road roundabout, it is constructed with a divided 'boulevard connector' cross-section, providing a single traffic lane and on-street bicycle lane in each direction. A footpath is provided on the western side of the carriageway.

3.2.6 Redstone Hill Road

Redstone Hill Road is classified as a local access street in Hume City Council's Register of Public Roads. It extends in a southern direction from Sunbury Road for approximately 700m, before turning 90° and continuing for a further 700m to the south-east.

In the vicinity of Sunbury Road, it is constructed to a rural standard with a sealed carriageway approximately 3.5m wide.

The intersection with Sunbury Road is located approximately 150m north-east of the Lancefield Road roundabout. Outbound movements are subject to a 'Give Way' control, with an auxiliary right turn lane provided on Sunbury Road for inbound movements.

3.2.7 Harker Street

Harker Street is classified as a local access street in Hume City Council's Register of Public Roads. It extends approximately 1.6km in an eastern direction from Evans Street in the Sunbury Town Centre, prior to terminating at the entrance to the Waste Water Treatment Plant.

East of Jackson Street, it is constructed with a rural sealed carriageway approximately 6m to 7m wide. A footpath is provided on the south side. The section between Evans Street and Jackson Street, is constructed to an urban standard with kerbs and footpaths provided on both sides of the carriageway.

3.2.8 Fox Hollow Drive

Fox Hollow Drive is classified as a local access street in Hume City Council's Register of Public Roads. It extends in a northern direction from Watsons Road for approximately 800m before terminating in a dead-end.

It is constructed to a rural standard with a sealed carriageway approximately 7m wide.

3.2.9 Watsons Road

Watsons Road is classified as a local access street in Hume City Council's Register of Public Roads. It extends approximately 2.5km in an east-west direction from Old Vineyard Road to Crinnion Road.

It is constructed to a rural standard with a sealed carriageway approximately 5.5m wide. An at-grade level crossing of the railway line is provided at the western end of Watsons Road.

3.2.10 Crinnion Road

Crinnion Road is classified as a local access street in Hume City Council's Register of Public Roads. It extends for approximately 1.7km in a north-south direction between Watsons Road and Bulla-Diggers Rest Road.

It is constructed to a rural standard with a sealed carriageway approximately 5.5m wide.

3.2.11 Bulla-Diggers Rest Road

Bulla-Diggers Rest Road is classified as a 'trunk collector' in Hume City Council's Register of Public Roads. It extends in an east-west direction between Sunbury Road (just west of the Deep Creek bridge at Bulla) to the Old Calder Highway in Diggers Rest.

It is constructed to a rural standard with a sealed carriageway approximately 6.5m wide.

Access to the Calder Freeway is provided by a full diamond interchange.

3.3 Future Road Projects (Non-PSP)

3.3.1 Outer Metropolitan Ring / E6 Transport Corridor

A Public Acquisition Overlay (PAO) for the Outer Metropolitan Ring / E6 Transport Corridor (OMR / E6) is located to the south-east of the subject site.

The planning for the transport corridor provides options for an ultimate freeway standard road, capable of up to four lanes in each direction and four railway tracks in the median for interstate freight and high-speed passenger trains between Werribee and Kalkallo and capable of ultimately being a six-lane freeway standard road elsewhere.

Design plans prepared for the project show the localised realignment of Sunbury Road, with a diamond interchange facilitating access onto the new freeway.

3.3.2 Bulla Bypass / Tullamarine Freeway Extension

Amendment C190 to the Hume Planning Scheme proposes to reserve land (via a Public Acquisition Overlay) for the Bulla Bypass and extension of the Tullamarine Freeway to the Outer Metropolitan Ring Road.

The potential routes were examined by a Planning Panel in 2015, with the preferred route submitted to the Minister for Planning for approval.

I understand that the Minister for Planning has requested VicRoads to review the preferred route, with the focus of the revisions being the alignment of the route adjacent to Oaklands Drive.

Based on discussions with VicRoads, I understand that background documents (including updated traffic modelling) is currently being prepared to accompany a revised Planning Scheme Amendment.

3.3.3 Gap Road / Horne Street

I understand that funding has been committed by the State Government for the upgrade of the existing roundabout to a signalised intersection at Gap Road / Horne Street.

The signalisation of this intersection will provide extra capacity and benefit traffic movements in the Sunbury Town Centre.

3.3.4 Yirrangan Road Extension

I understand that Places Victoria (in conjunction with Hume City Council) will extend Yirrangan Road to Buckland Way. The extension will create an additional connection to the Jacksons Hill Estate and will reduce pressure on the Station Street level crossing.

3.3.5 Elizabeth Drive Extension

I understand that Elizabeth Drive will be extended south of Mitchells Lane to Vineyard Road. The extension will provide a western bypass of the Sunbury Town Centre.

3.4 Public Transport Network

The following public transport infrastructure is located in the vicinity of the Sunbury South PSP:

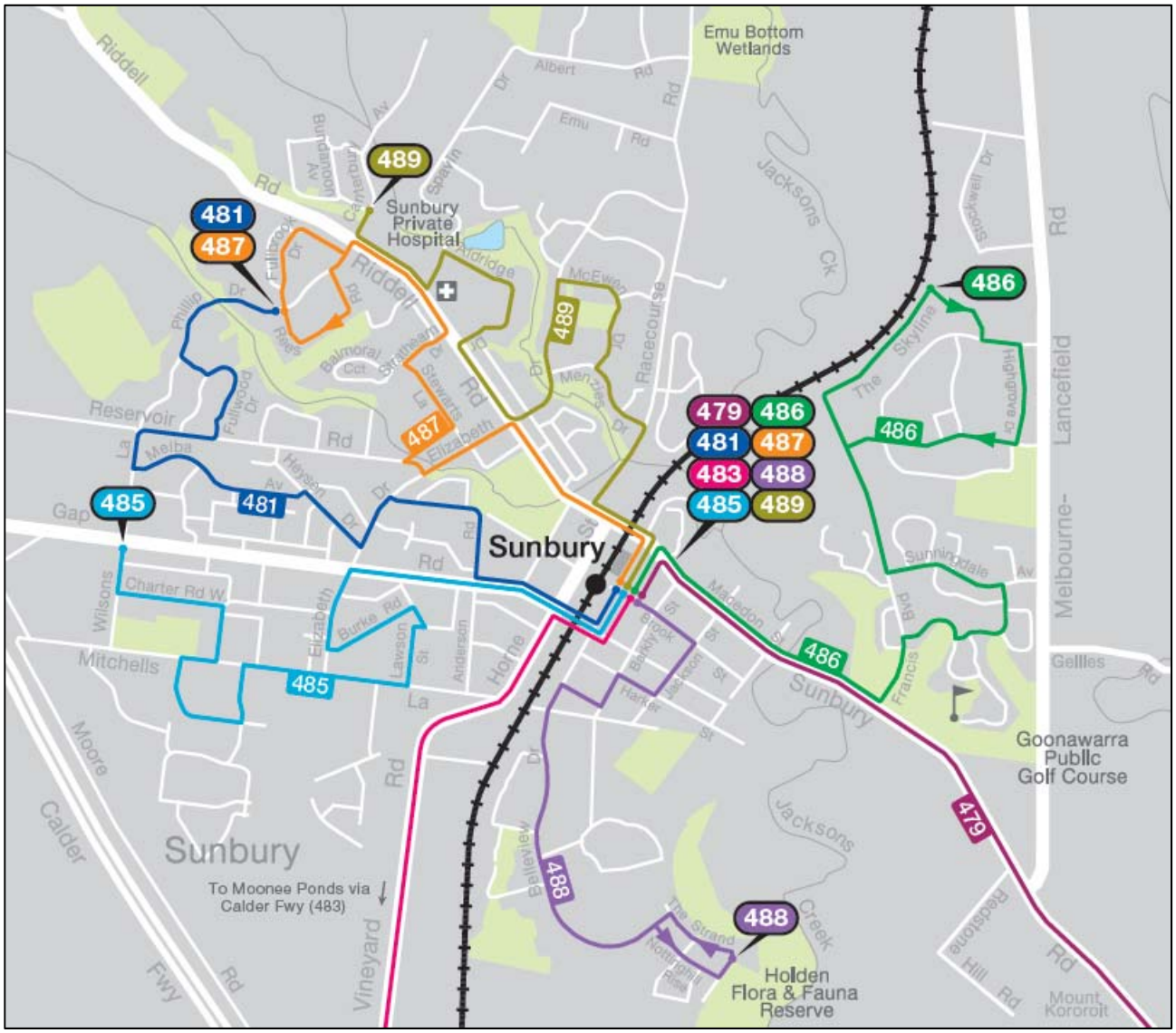
> Sunbury Railway Station is located to the north-west near the existing Sunbury Town Centre. Rail services operate on the Sunbury line as part of the metropolitan network, with V-Line services on the Swan Hill / Bendigo railway line also stopping at the Sunbury. A bus interchange serving eight local bus routes is also located in close proximity to the station.

> Bus Route 479 operates along Sunbury Road and provides a service between Sunbury Station and Airport West Shopping Centre via Melbourne Airport.

> Bus Route 486 operates along Sunbury Road and Francis Boulevard and provides a loop service from Sunbury Station through Goonawarra.

The local public transport network is shown in Figure 3-2.

Figure 3-2 Sunbury Public Transport Network



3.5 Bicycle Network

The following bicycle infrastructure is located in the vicinity of the Sunbury South PSP:

> On-street bicycle lanes along Francis Boulevard to the north of Sunbury Road;

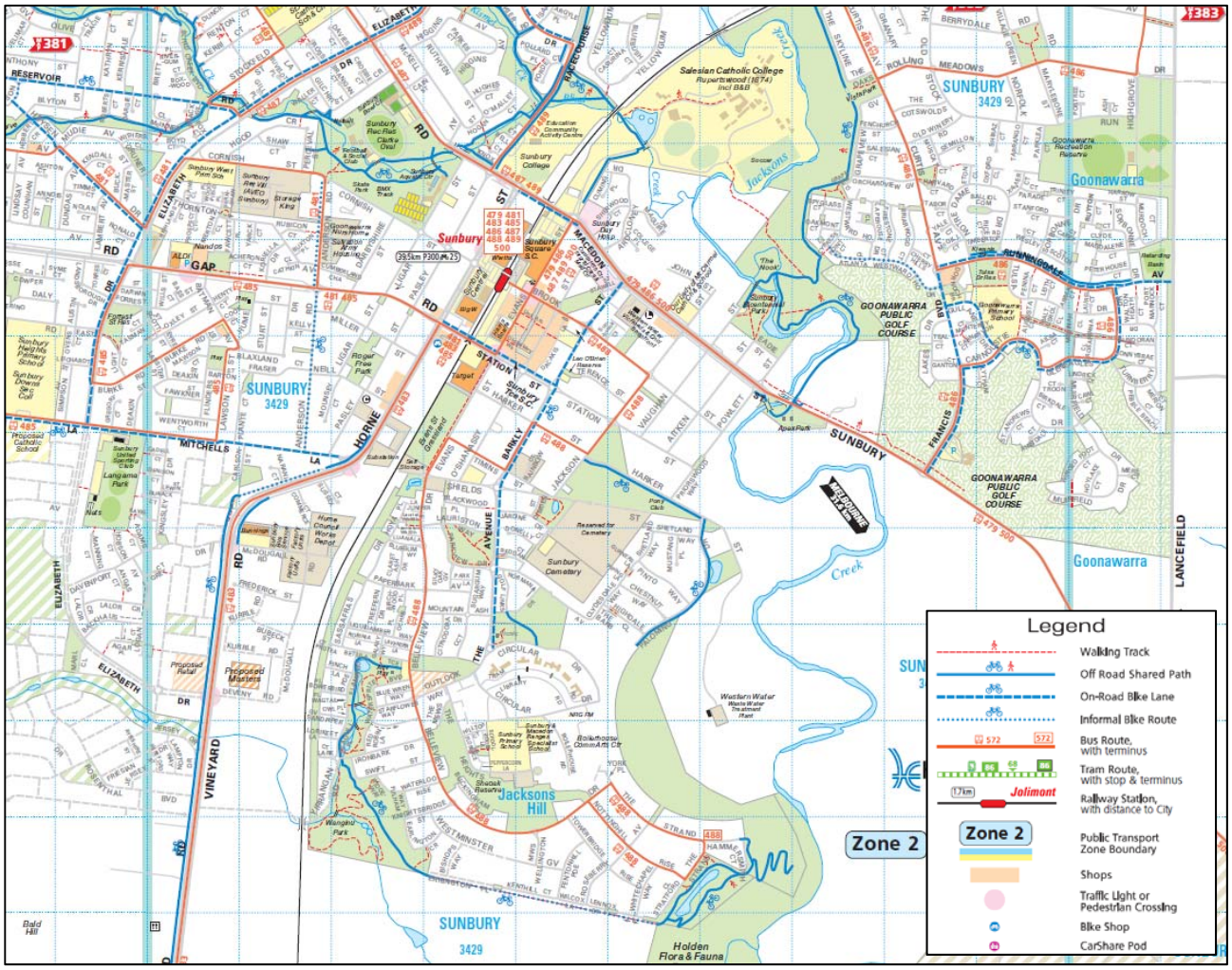
> An off-road shared path along the Jacksons Creek reserve to the north of Sunbury Road;

> An off-road shared path along Harker Street on the west side of Jacksons Creek; and

> On-street bicycle lanes along Barkly Street and Station Street near the existing Sunbury Town Centre.

The local bicycle network is shown in Figure 3-3.

Figure 3-3 Sunbury TravelSmart Map



4 Exhibited Sunbury South PSP

4.1 Hume Amendment C207

Amendment C207 to the Hume Planning Scheme has been prepared by the Victorian Planning Authority (VPA).

The amendment applies to approximately 1,798 ha of land referred to as the Sunbury South Precinct, which is located to the south and south-east of the existing Sunbury Township.

The amendment proposes to insert the Sunbury South Precinct Structure Plan into the Hume Planning Scheme as an incorporated document. The amendment also seeks to apply the Urban Growth Zone Schedule 9 to facilitate the development of land and apply the Rural Conservation Zone to land that falls within the Biodiversity Conservation Strategy area and areas of significant regional landscape value.

4.2 Future Urban Structure

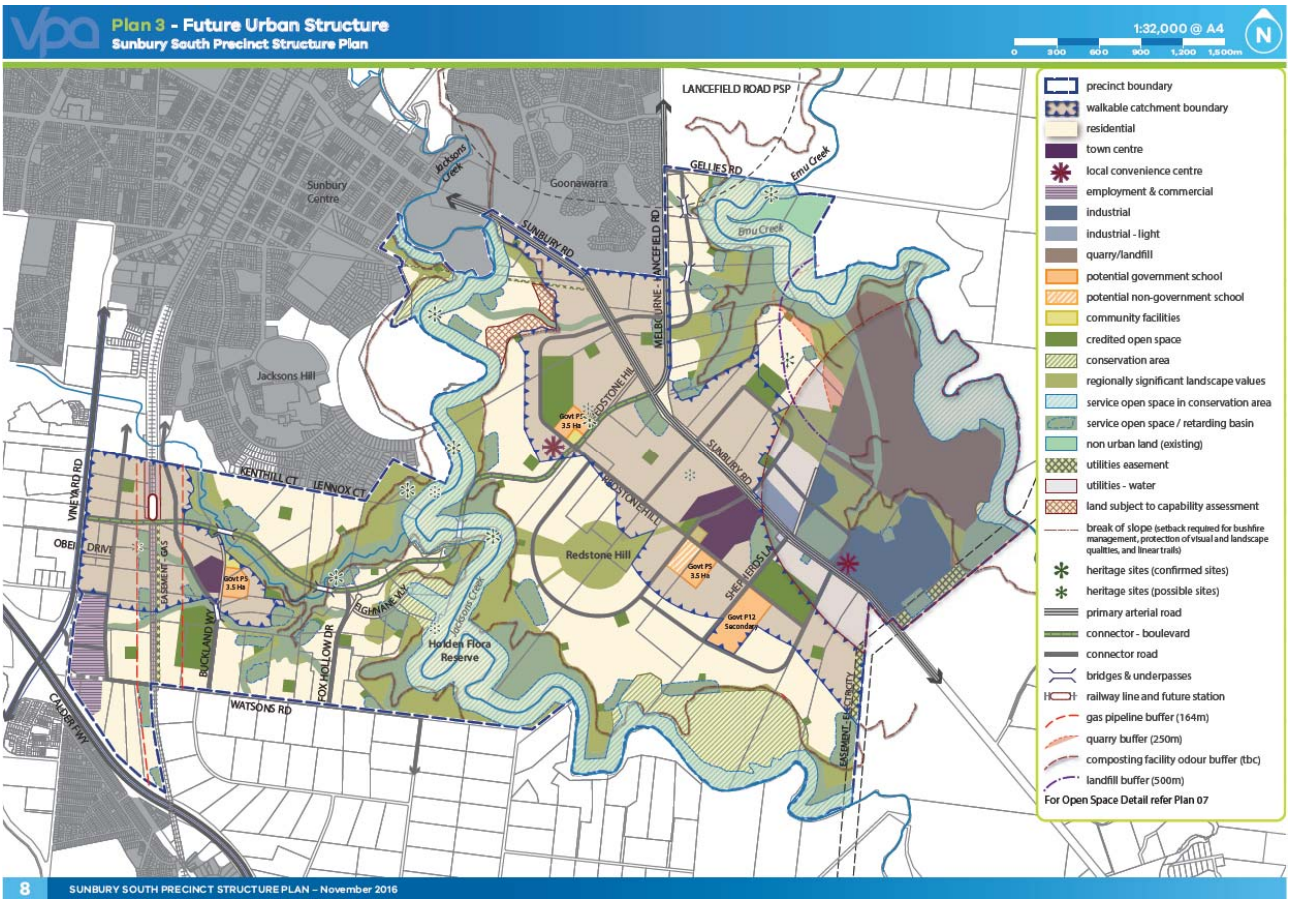
The exhibited Future Urban Structure plan for the Sunbury South Precinct is shown in Figure 4-1.

A total of 720 ha within the PSP are designated for residential development, which equates to approximately 11,800 dwellings and 33,000 residents (based on an average development yield of 15 dwellings per net developable hectare). The PSP also includes a total of 65.64 ha of land available for industrial development.

Within the subject site, a Government Primary School, Community Centre and Local Convenience Centre are located on the north-east side of the boulevard connector road. The site also includes a number of areas allocated to open space.

The Redstone Hill Major Town Centre is located to the south-east of the subject site within the adjacent Villawood land. The PSP considers the development of 25,000 m^2 of retail floor area and 10,000 m^2 of commercial floor area at the Major Town Centre.

Figure 4-1 Sunbury South PSP – Exhibited Future Urban Structure



4.3 Street Network

The exhibited Street Network plan for the Sunbury South Precinct is shown in Figure 4-2.

The Street Network plan shows the higher order network (arterials and connectors), as well as intersection treatments onto the arterial network and at key internal intersections.

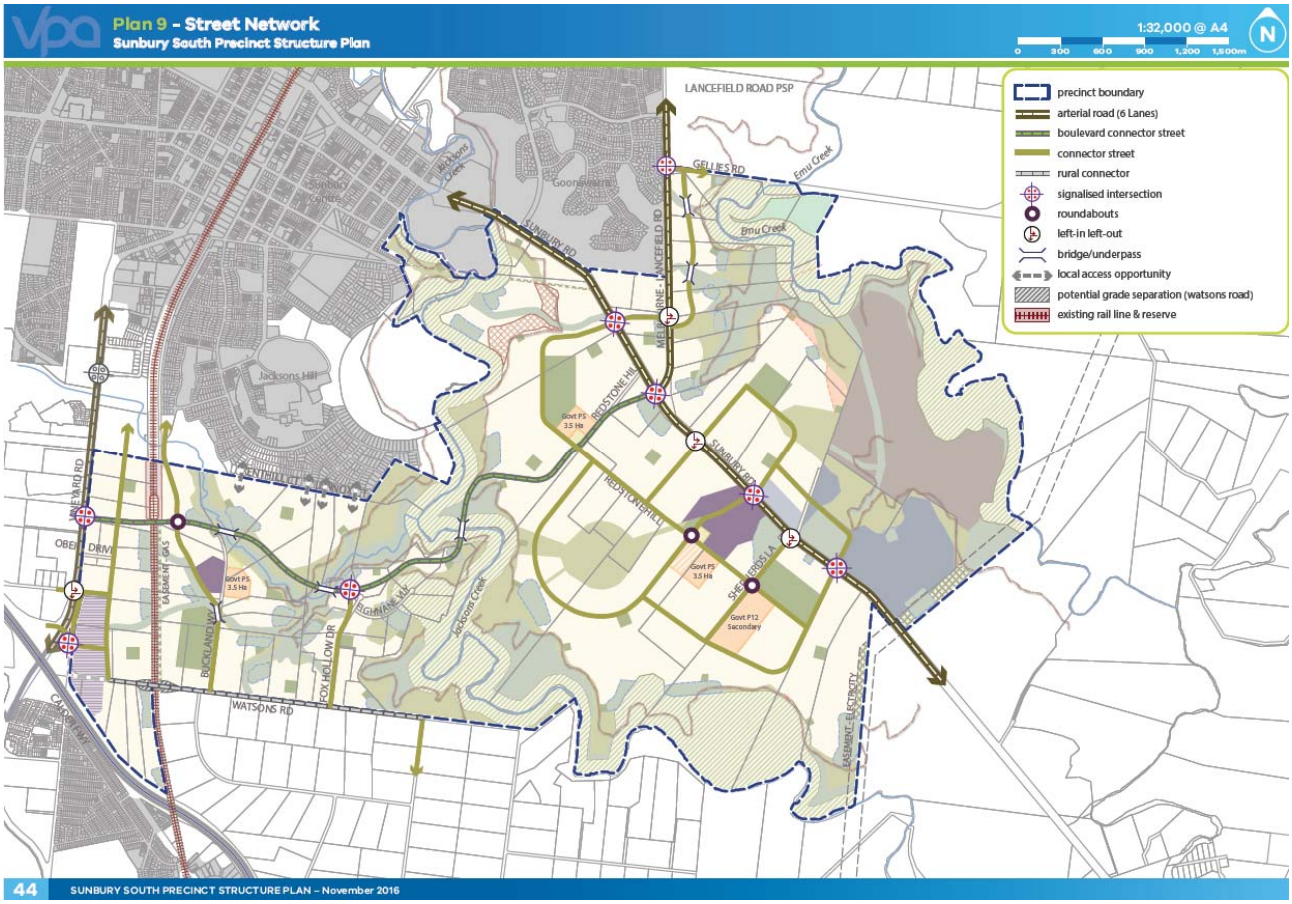
The arterial road network is comprised of Sunbury Road, Lancefield Road and Vineyard Road. The cross-sections set out in the exhibited PSP show each of these roads ultimately being constructed with a divided cross-section carrying three traffic lanes in each direction.

A Boulevard Connector Street is shown connecting the Sunbury Road / Lancefield Road intersection to Vineyard Road via a bridge crossing of Jacksons Creek. The cross-section set out in the exhibited PSP, shows a divided carriageway providing a single traffic lane and parking lane in each direction. Section 2.1 of the Exhibited PSP acknowledges the importance of the Boulevard Connector within the vision of the Precinct stating:

> *"The proposed southern link crossing of the Jacksons Creek provides for important local connections as well as a more robust local road network for the broader Sunbury growth area."*

A number of additional connector streets are shown on the south-west side of Sunbury Road, with the local connector street that runs parallel to Sunbury Road looping around to form a cross-intersection (IN-04) to the north-west of the Sunbury Road / Lancefield Road intersection, before continuing to Lancefield Road. The cross-section set out in the exhibited PSP for the standard connector streets shows a single carriageway providing a single traffic and parking lane in each direction.

Figure 4-2 Sunbury South PSP – Exhibited Street Network



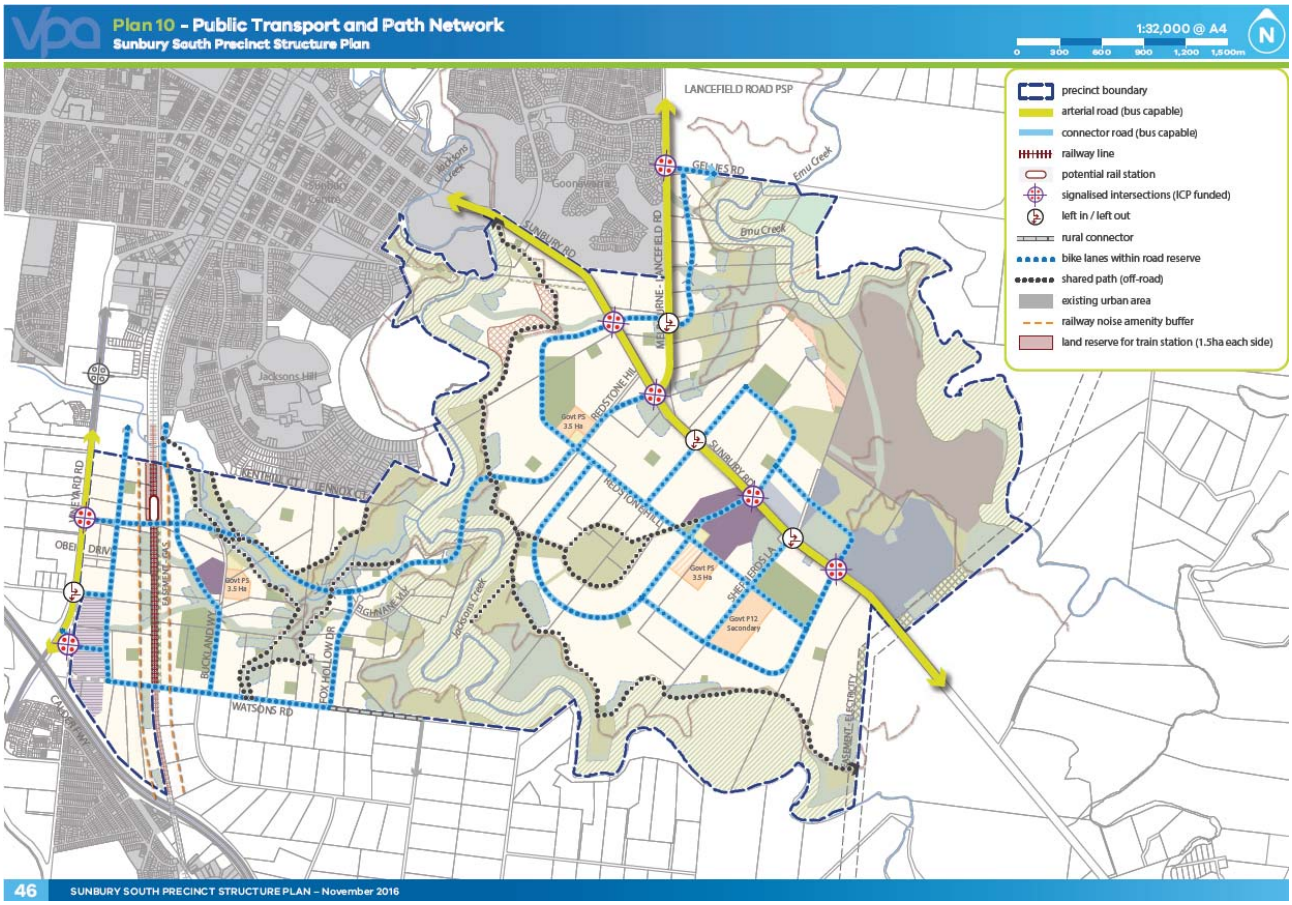
4.4 Public Transport and Path Network

The exhibited Public Transport and Path Network plan for the Sunbury South Precinct is shown in Figure 4-3.

A new railway station is identified in the western part of the Precinct, with the arterial roads and connector streets identified as bus capable roads.

Off-road bicycle lanes are identified along each connector street within the road reserves, with additional off-road shared paths identified along the creek corridors and the Redstone Hill reserve.

Figure 4-3 Sunbury South PSP – Exhibited Public Transport and Path Network



5 Infrastructure Contributions Plan

The exhibited documents include a report titled *'Sunbury Infrastructure Co-Ordination & Delivery Strategy (Draft)'* prepared by the VPA, dated November 2016[1].

The strategy provides guidance on the infrastructure priorities to facilitate the growth and development of Sunbury. The Strategy sets out the priorities under four stages as follows:

> Stage 1 – Short Term Growth – Sunbury to 50,000 (next 5-10 years)

> Stage 2 – Medium Term Growth – Sunbury to 70,000 (10+ years)

> Stage 3 – Long Term Growth – Sunbury to 100,000 (25+ years)

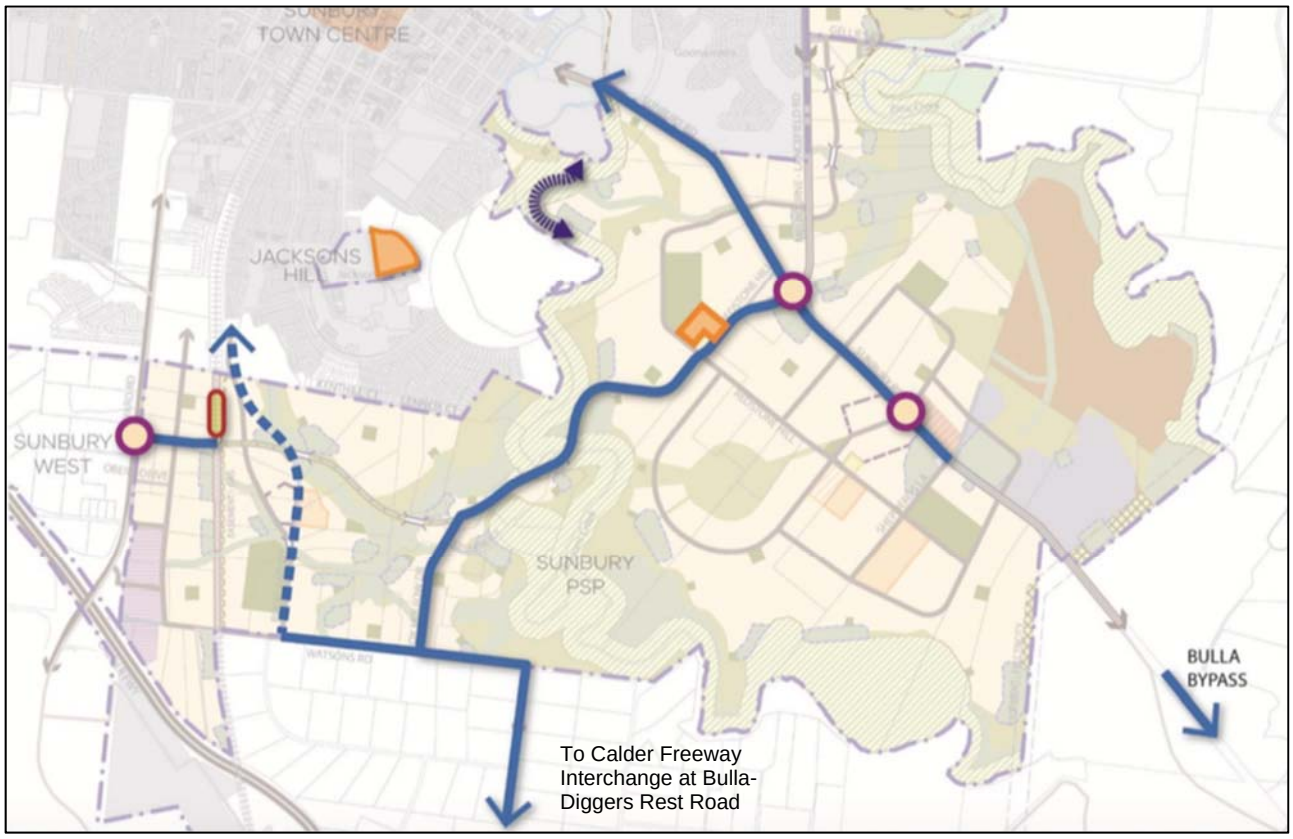
> Stage 4 – Ultimate Build-Out – Sunbury at 125,000 (35+ years)

Infrastructure for the Sunbury South Precinct are primarily set out in Stage 1, with additional infrastructure set out in Stages 2 & 3.

5.1 Stage 1 Infrastructure – Southern Jacksons Creek Crossing

Stage 1 of the Strategy prioritises the southern crossing of Jacksons Creek to provide a new connection between Sunbury Road and the Calder Freeway as shown in Figure 5-1.

Figure 5-1 Sunbury Infrastructure Co-Ordination & Delivery Strategy – Stage 1 Priorities



[1] *I understands that an Infrastructure Contributions Plan (ICP) for the Sunbury South Precinct will be subject to a separate amendment.*

Implementation of this new route will require the following infrastructure works and upgrades:

> IN-03: Land and construction of the interim Sunbury Road / Lancefield Road / Boulevard Connector signalised intersection;

> RD-04: Land and construction for the Boulevard Connector Street from Sunbury Road to Fox Hollow Drive;

> BR-01: Construction of the bridge across Jacksons Creek;

> RD-06: Land and construction for the upgrade of Fox Hollow Drive;

> RD-07: Upgrade of Watsons Road between Buckland Way and Crinnion Drive; and

> RD-08: Upgrade of Crinnion Drive to Bulla-Diggers Rest Road.

It is noted that Stage 1 of the Infrastructure Strategy does not include the east-west section of the Boulevard Connector (linking the southern creek crossing to Vineyard Road). Given that the Stage 1 works include the upgrade of an alternative route to the Calder Freeway (via Fox Hollow Drive, Watsons Road and Crinnion Drive), I am satisfied that the omission of this section does not significantly affect regional traffic movements.[2]

The Strategy nominates Hume City Council as the lead agency for each project. Developer partners are also nominated for each project (with the exception of BR-01). The ICP is nominated as the funding source for each project.

Based on the GTA modelling of the interim 25% development scenario (see Section 6.2), I agree that the infrastructure works associated with the alternative route to Calder Freeway (including construction of the southern creek crossing) should occur as part of the Stage 1 Infrastructure Works once sufficient funds are available in the ICP.[3]

In order to ensure that the PSP recognises that strategic importance of the southern creek crossing in facilitating the development of the Sunbury Growth Corridor, I recommend that an objective be included in Section 2.2 of the PSP and consideration be given to placing a Public Acquisition Overlay (PAO) over the route to ensure the timely delivery of the project.

5.2 Stage 2 Infrastructure – Sunbury Road / Northern Connector Intersection

The Strategy includes the Sunbury Road / Northern Connector signalised intersection (IN-04) as part of the Stage 2 infrastructure priority works.

While Stage 1 of the Strategy nominates Capitol Property as being the delivery partner for the Sunbury Road / Lancefield Road intersection, I note that a small parcel of land held by a third-party land owner is located on the south side of the intersection.

As such, agreement with this land holder will be required to enable the construction of the interim Sunbury Road / Lancefield Road intersection and completion of the new route to the Calder Freeway (via the southern crossing of Jacksons Creek).

If the third-party land were not available to complete the route, an alternative would be to deliver the Sunbury Road / Northern Connector signalised intersection and associated connector street link to the Boulevard Connector Street. The delivery of this alternative route would be relatively straight forward given the land on the south side of the intersection is contained entirely within the Capitol Property site.

Accordingly, I am of the opinion that the Strategy should be amended to provide flexibility for IN-04 to be included as a Stage 1 priority in the event that IN-03 is not able to be delivered in a timely manner.

The flexibility would also enable the development of the subject site to occur in a timely and efficient manner.

[2] The east-west section will become a strategically important connection once as the proposed Sunbury South Railway Station becomes operational.

[3] I note that the existing network performance does not significantly deteriorate without the bridge crossing indicating that the initial development of the Sunbury South and Lancefield Road Precincts can occur prior to the bridge crossing being completed.

6 Sunbury Growth Corridor Traffic Modelling

GTA Consultants were engaged by the VPA to undertake strategic transport modelling for the Sunbury Growth Corridor.

Traffic modelling for the ultimate and interim (75%) development scenarios was published in a report titled *'Strategic Transport Modelling of the Sunbury & Diggers Rest Growth Corridor'* dated 5 October 2015.

Additional modelling for the interim (25% & 50%) development scenarios was published in a supplementary report titled 'Sunbury Growth Corridor DCP Modelling Supplementary Report' dated 1 February 2017.

The assumptions adopted in the traffic modelling were based on import from relevant stakeholders (VPA, VicRoads, etc.), with the model being calibrated to reflect existing conditions based on survey data.

The traffic modelling used the Victorian Integrated Transport Model (VITM) for the purpose of determining:

> The anticipated demands on the transport network as a result of the Sunbury South and Lancefield Road PSPs;

> The suitability and necessity of the Jacksons Creek crossings; and

> The need for any further infrastructure upgrades to support the PSPs.

6.1 Ultimate Development Scenario

The ultimate development scenario considers the full development of the Sunbury and Diggers Rest Growth Corridor to a population of approximately 135,000 people.

A total of nine (9) road network options were developed for the ultimate development scenario, based on the inclusion or omission of key transport infrastructure (creek crossings, railway stations, additional connection to Calder Freeway and Outer Metropolitan Ring). All options include the Bulla Bypass.

Options 1, 2, 5, 6 & 7 consider the provision of the southern creek crossing, whilst Options 3, 4, 8 & 9 consider the omission of the creek crossing.

The network operating conditions for the ultimate development scenario was comparable for each option and not significantly worse than current levels. The predicted average speeds for each option was also slightly better than the predicted Metropolitan Melbourne average for the ultimate design year.

The inclusion or omission of the creek crossings did not have a significant bearing on the overall performance of the network (although the inclusion of the bridges reduced traffic volumes in the Town Centre), with the GTA report concluding that … *"the results demonstrate from a transport perspective that the two PSPs are able to function regardless of the introduction of the river crossings"*.

The OMR was found to have an impact on traffic volumes within the network, with a noteworthy reduction in traffic volumes across the southern Jacksons Creek bridge when the OMR was included in the network.

Given the likely timeframes associated with the full development of the Sunbury Growth Corridor (35+ years), I am of the opinion that the volume fluctuations across the bridge for ultimate development scenario have little bearing on the exhibited PSP.

6.2 Interim (25%) Development Scenario

The interim 25% development scenario considers the development of 8,000 lots, as follows:

> 25% development of the Sunbury South and Lancefield Road Precincts (5,000 lots); and

> An additional 3,000 lots within the wider development area[4] (inclusive of Sunbury South).

[4] *The wider development area includes Sunbury South, Lancefield Road, Diggers Rest, Sunbury West and Sunbury North Precincts.*

Five road network options were assessed as part of the supplementary report, in addition to a 'do nothing' case. The options considered the inclusion or omission of the southern Jacksons Creek crossing, duplication of Bulla Bridge and duplication of Sunbury Road.

Option 5, which considers the southern Jacksons Creek crossing without the east-west link to Vineyard Road nor any upgrades to Sunbury Road or the Bulla Bridge, best represents VPA's preferred Stage 1 infrastructure priorities set out in the Sunbury Infrastructure Co-Ordination and Delivery Strategy.

A comparison of the volumes between the 'do nothing' case and Option 5 for Sunbury Road set out in the supplementary report indicates the inclusion of the southern Jacksons Creek crossing results in:

> Negligible difference to traffic volumes on Sunbury Road (at Bulla – Diggers Rest Road and Bulla Bridge) due to the limitations of the network through Bulla; and

> A fall in traffic volumes through the Sunbury Town Centre (although a lesser fall compared to Option 1 that included the connection of the Boulevard Connector to Vineyard Road).

I have compared the Volume / Capacity (V/C) plots of Option 5 against the 'do nothing' case as presented below.

The V/C plots indicate that the road network within the Sunbury Town Centre (shown in yellow) is not saturated and has sufficient capacity to cope with the increased traffic loads under the 'do nothing' case.

It is noted that traffic volumes at the existing bridge across Jacksons Creek on Sunbury Road (located to the north-west of Francis Boulevard) are close to their practical capacity for the 'do nothing' case, however, this constraint is effectively no different to the reference case representing existing conditions.

Figure 6-1 Sunbury Traffic Modelling Reference Case (i.e. Existing Conditions)

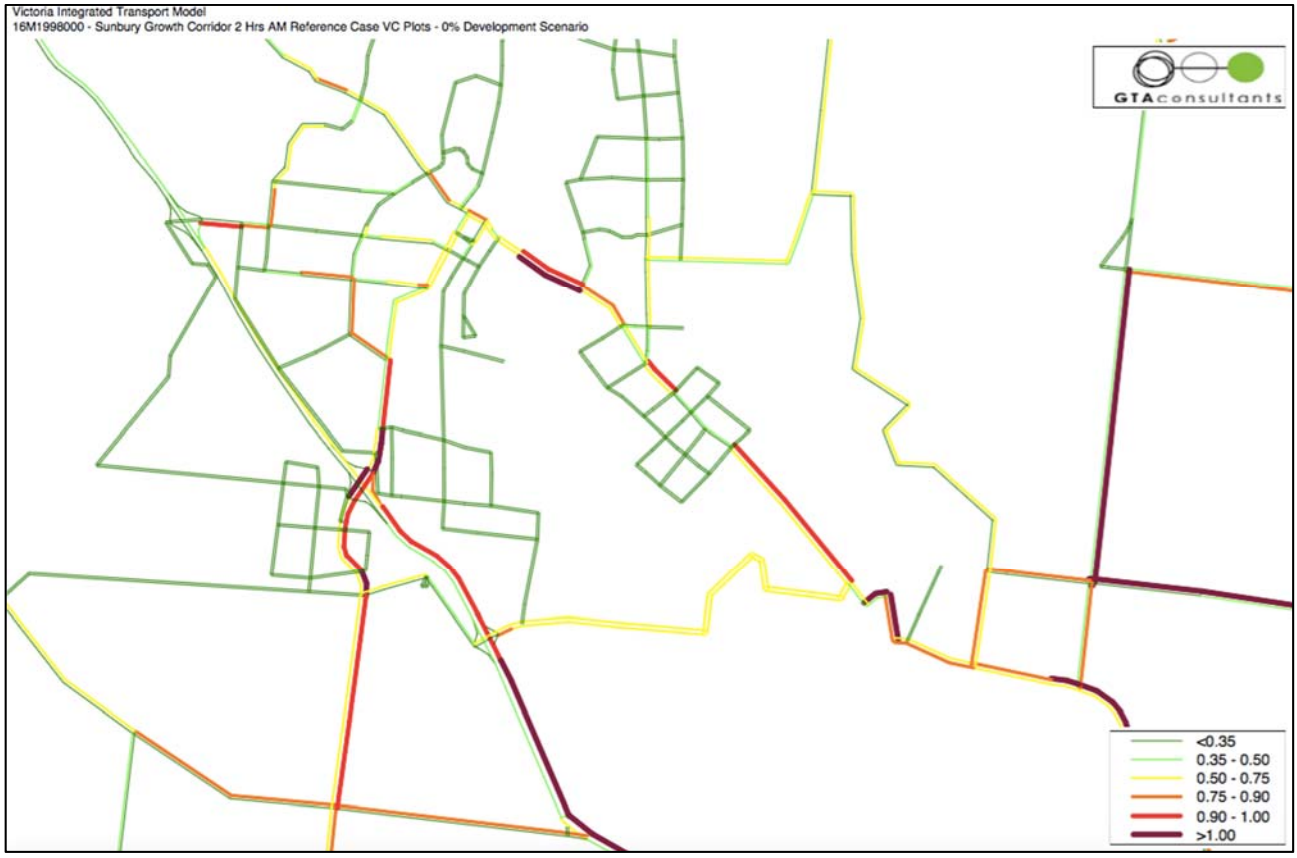
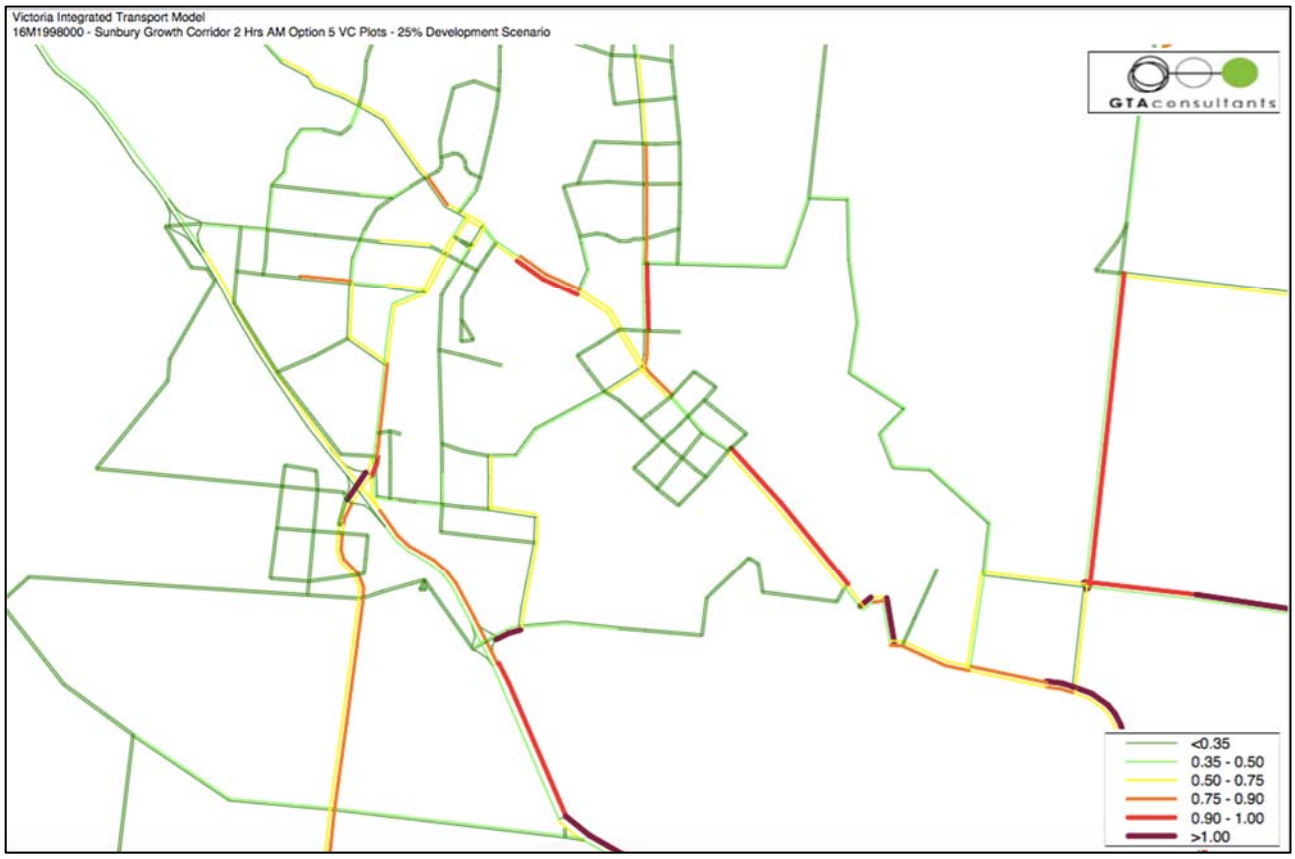


Figure 6-2 Sunbury Traffic Modelling Interim 25% Development Scenario – 'Do Nothing' Case

Figure 6-3 Sunbury Traffic Modelling Interim 25% Development Scenario – Option 5



In addition to the above plots, I have also compared the difference in daily and peak traffic volumes for the 'Do Nothing' and 'Option 5' cases. Table 6-1 and Table 6-2 provide a summary of the daily and peak traffic volumes for the interim 25% development scenario as per the GTA supplementary report.

Table 6-1 Sunbury Road North of Bulla – Diggers Rest Road

	'Do Nothing'	'Option 5'	Difference
Daily Volumes (vpd)	30,011	29, 434	-577
2-Hour AM Peak Volumes: Eastbound	2,338	2,224	-114

Table 6-2 Sunbury Road at Bulla Bridge

	'Do Nothing'	'Option 5'	Difference
Daily Volumes (vpd)	35,739	35,599	-140
2-Hour AM Peak Volumes: Eastbound	2,662	2,616	-46

In effect, the modelling indicates that the provision of the southern bridge crossing does not materially decrease the traffic volume on Sunbury Road, or through the Bulla Township.

Further traffic volume comparison of the Sunbury Town Centre for the interim 25% development scenario is shown in Table 6-3 and Table 6-4.

Table 6-3 AM 2-Hour Peak Period Traffic Volumes – Sunbury Town Centre

Location	'Do Nothing' (2 hr)	'Option 5' (2 hr)	Difference (2 hr)
Macedon Street south of Barkley Street	4,222	3,825	-397
Horne Street between Gap Road and Macedon Street	3,942	3,549	-393
Vineyard Road south of the Elizabeth Drive extension	5,185	4,867	-318

Table 6-4 PM 2-Hour Peak Period Traffic Volumes – Sunbury Town Centre

Location	'Do Nothing' (2 hr)	'Option 5' (2 hr)	Difference (2 hr)
Macedon Street south of Barkley Street	4,625	4,032	-593
Horne Street between Gap Road and Macedon Street	4,220	3,810	-410
Vineyard Road south of the Elizabeth Drive extension	5,156	4,916	-240

The volume comparison indicates that without the southern bridge connection the future volumes through the Sunbury township increase. The modelling indicates that this increase is in the order of 400-600 vehicles per 2 hours, 2-way, which would translate to approximately 130-195 vehicles per hour in the peak direction for the AM and PM peaks (adopting a 0.55 peak hour factor and peak direction factor of 0.6).

Although there is a level of congestion in the commuter peak periods along the northern section of Horne Street, the anticipated increase in traffic volumes would not lift the level of congestion to a level experienced on arterial roads in the western, northern and south-eastern growth corridors of Melbourne.

While I acknowledge the importance of delivering the southern Jacksons Creek crossing in a timely manner as per the Infrastructure Co-Ordination and Delivery Strategy, my review of the interim (25% development) traffic modelling indicates that there is sufficient capacity in the network to accommodate the initial development of Sunbury South and Lancefield Road Precincts without the bridge crossing.

7 Sunbury Road Cross-Section

The exhibited Sunbury South PSP provides two cross-sections (with minimal differences) for Sunbury Road as shown in Figure 7-1 and Figure 7-2 below.

Option 1 has an overall width of 59.1m, while Option 2 has an overall width of 60.4m, which I understand corresponds to the existing road reservation. Both cross-sections provide divided carriageways with 3 x 3.5m traffic lanes separated by a 15.0m median, with a 2.0m pedestrian path and 3.0m bicycle path provided on both sides.

Figure 7-1 Exhibited Sunbury Road Cross-Section – Option 1

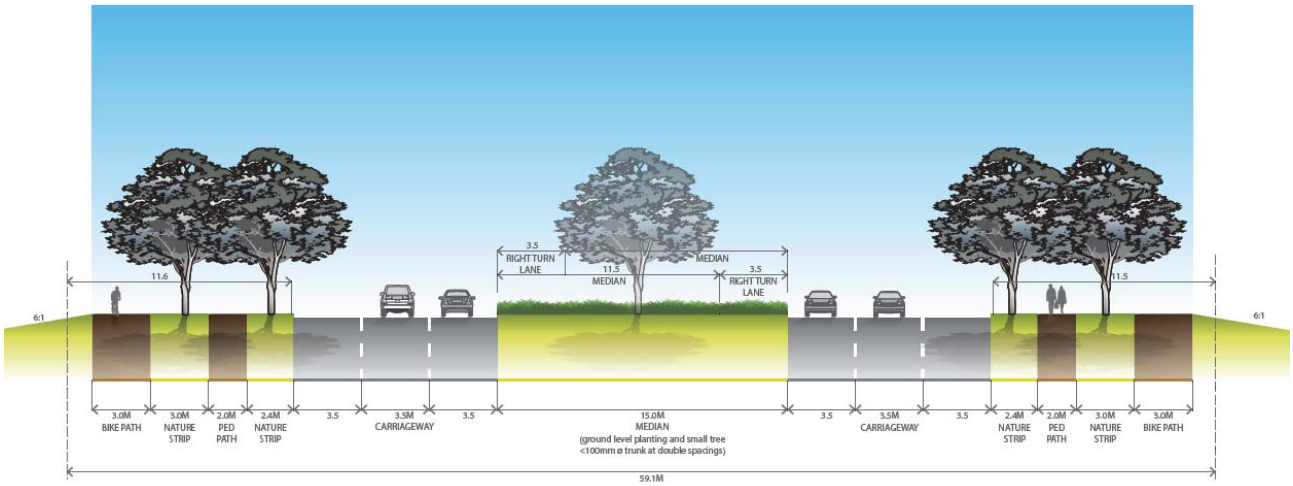
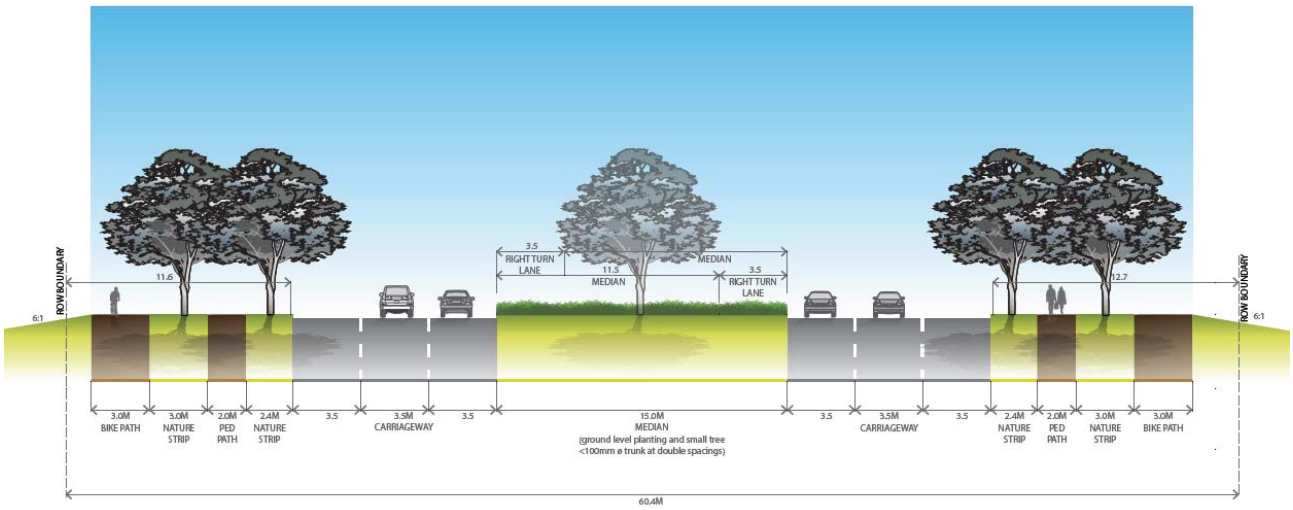


Figure 7-2 Exhibited Sunbury Road Cross-Section – Option 2



Aside from its transport function, Sunbury Road will need to accommodate a number of services within the verges and median.

Plan 12 of the Exhibited PSP shows the existing and proposed utilities within the Precinct. Along Sunbury Road, the following services are shown:

> Existing potable water;

> Proposed sewer rising main;

> Existing telecommunications;

> Existing electricity (transmission line) – southern part;

> Existing electricity (overhead) – northern part;

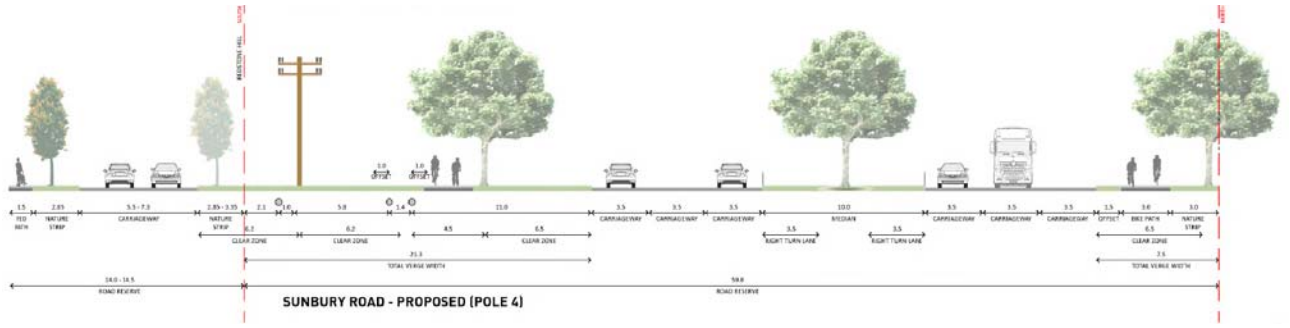
> Existing recycled water.

It is noted that the number of services and position of the existing carriageway varies along the length of Sunbury Road and consequently it would be reasonable to expect that the required verge and median widths to accommodate these services will also change at different sections along Sunbury Road. Variations to the standard cross-section will also be required at bends to ensure appropriate design radii are provided.

These variances would be resolved during the detailed design of the duplicated road, which would be undertaken by VicRoads when funding becomes available for the upgrade project at some point in the future.

Concept plans have been prepared by Mesh (on behalf of Villawood) demonstrating an alternative ultimate cross-section of Sunbury Road with a 10.0m median as shown in . The alternative plans show the future Sunbury-bound carriageway in the approximate location of the existing carriageway, with the construction of the additional Melbourne-bound carriageway located on the north-eastern side of the reservation.

Figure 7-3 Alternative Cross-Section prepared by Mesh



Due to the central position of the existing carriageway, the alternative cross-section is off-centre with a shift of the carriageways towards the north-eastern side of the road compared to the exhibited cross-section.

The proposed 10.0m median is of sufficient width to accommodate 2 x 3.5m right turn lanes at the Lancefield Road signals, plus a 3.0m pedestrian refuge[5], and accordingly I am satisfied that the reduced median width is satisfactory from a traffic design perspective. I understand that the reduced median width also has in-principle support from VicRoads.

Furthermore, I am of the opinion that a single 3.0 metre shared path on each side of the Sunbury Road carriageway would be adequate rather than both a 2.0 metre footpath and a 3.0 metre bike path as currently shown on the exhibited cross sections. This is particularly the case as a separate footpath is generally provided across the frontage of lots along Sunbury Road (that is along the loop roads).

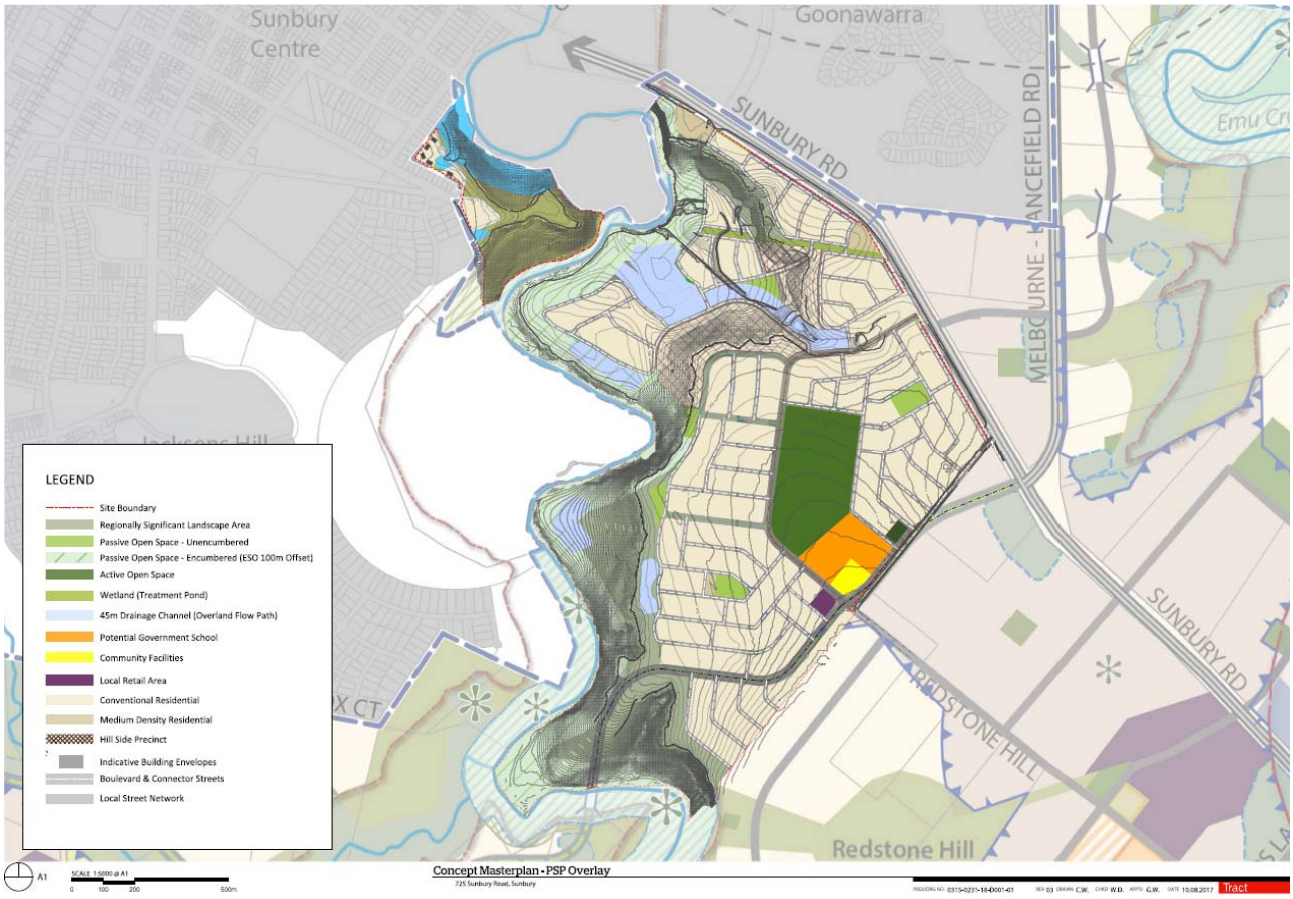
I am of the opinion that it would be appropriate to amend the PSP cross-section to reflect the concept plans prepared by Mesh. To alleviate the need to produce multiple cross-sections it would seem more sensible to provide a single cross-section within the PSP, with the median and verge widths noted as variable.

[5] *This exceed the minimal pedestrian refuge width of 2.5m.*

8 Concept Masterplan (by Tract)

The concept masterplan for the subject site (prepared by Tract, dated 10 August 2017) is shown in Figure 8-1. This plan provides context for the intersections that are discussed in Section 9.

Figure 8-1 Concept Masterplan



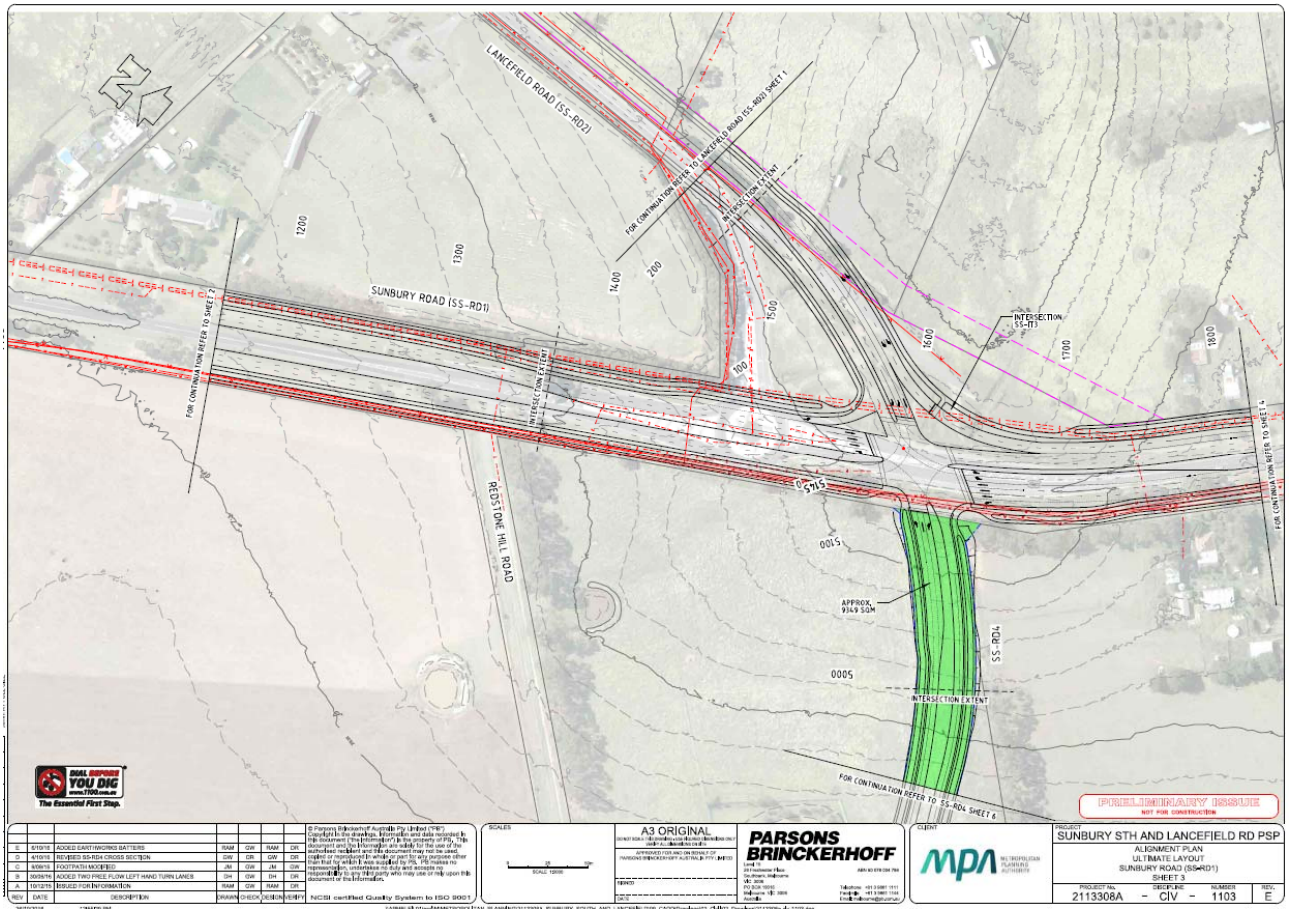
9 Access Considerations

9.1 Sunbury Road / Lancefield Road Intersection (IN-03)

9.1.1 IN-03 Location

The exhibited PSP shows the Sunbury Road / Lancefield Road intersection in its current position, however, the alignment plans prepared by Parsons Brinckerhoff (2113308A-CIV-1103, Rev E) that were exhibited as part of the background documents shows the intersection repositioned approximately 100m east of the existing roundabout as shown in Figure 9-1.

Figure 9-1 Exhibited Concept Ultimate Alignment Plan – Sunbury Road / Lancefield Road (IN-03)



I understand that the Parsons Brinckerhoff plans repositioned the intersection on the basis that an 80 km/h design speed should be maintained on the northern leg of the intersection.

I am of the opinion that the repositioning of the intersection is flawed for the following reasons:

> The north-south alignment of the repositioned intersection would no longer be perpendicular to Sunbury Road.

> A significant proportion of traffic approaching the intersection from the north will be turning as indicated by the ultimate lane configuration of two left and two right turn lanes, with only a single through lane. Design speeds for these turn movements would be significantly slower than the desired 80 km/h speed. Further, the southern leg (Boulevard Connector) is likely to be subject to a 50 km/h speed limit.

> The existing roundabout will be used as a pre-interim access for the initial stages of development of land south of Sunbury Road. Repositioning the interim / ultimate signalised intersection would create a significant extent of redundant works associated with the connection to the roundabout, plus the need to set aside land for the future connection to the signals.

Alternative concept plans originally prepared by Traffix Group, and then modified by Ratio to reflect the alternative Sunbury Road cross-section discussed in Section 7, demonstrate an alternative alignment of the intersection in the same position as the previous roundabout.

I support the alternative (i.e. existing) alignment of the intersection and consider retention of the intersection in the existing location is essential to efficient and orderly development of land on the south side of Sunbury Road.

As noted in Section 7, the alternative cross-section for Sunbury Road is 'off-centre' with the verge on the north-eastern side of the road narrower than the exhibited cross-section. Due to the repositioned carriageways, additional land take may be required on the north-eastern side of the existing reservation to accommodate the ultimate double continuous left turn arrangement from Lancefield Road into Sunbury Road.

Relevant sections of the exhibited PSP and future ICP should be updated to reflect this change.

I note that the extent of the intersection shown on Plan 13 (Precinct Infrastructure Plan) of the exhibited PSP would appear incorrect, with a long south-eastern leg and a short north-western leg shown. I recommend that the extent of the intersection shown on Plan 13 be corrected on any subsequent versions of the PSP.

I also note that Plan 8 of the exhibited PSP shows two trees on the south side of the proposed intersection. Concept layout plans prepared by Cardno indicate that these trees will need to be removed and accordingly I recommend that Plan 8 be updated to reflect the need to remove these trees as part of the intersection works.

9.1.2 Pre-Interim and Interim Layouts (IN-03)

A fourth leg is likely to be constructed to the existing roundabout as a pre-interim access arrangement to facilitate access to the initial stages of development of the subject site and the adjacent Villawood land.

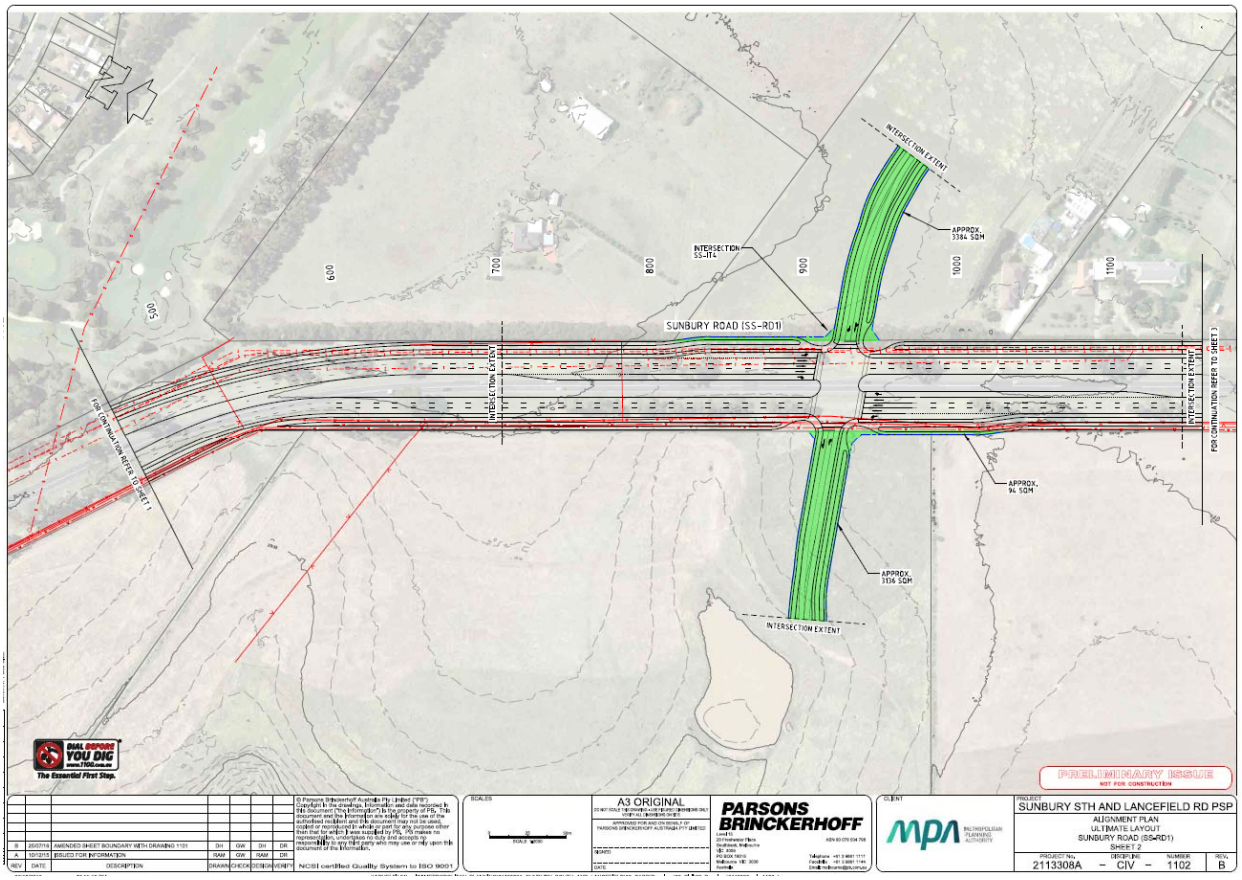
Cardno drawing number V171123-TR-SK-0006 (attached as Appendix A1) shows the pre-interim configuration for IN-03. It is envisaged that this intersection would be delivered early as part of Stage 1 infrastructure, commencing the first stages of the construction of RD-04 (the southern connector street).

The interim signalised intersection for IN-03 is shown in Cardno drawing V171123-TR-SK-0003 (attached as Appendix A2). This concept layout shows the typical extent of works associated with an interim intersection and will be funded by the ICP.

9.2 Sunbury Road / Connector Street Intersection (IN-04)

The concept ultimate alignment plans prepared by Parsons Brinckerhoff (2113308A-CIV-1102, Rev B) for the Sunbury Road / Connector Street intersection shows the proposed flaring of the existing road reservation on the approaches to the intersection as shown in Figure 9-2.

Figure 9-2 Exhibited Concept Ultimate Alignment Plan – Sunbury Road / Connector Street (IN-04)



Sunbury Road has a reservation of approximately 60m, which should be more than sufficient to accommodate the intersection layout without the need to widen on the approaches.

I note that the alternative Sunbury Road cross-section prepared by Mesh reduced the median width to 10.0m and repositioned the carriageways, thus alleviating the need to widen the reservation on the south side.

As discussed in further detail in Section 7, I am of the opinion that it would be appropriate to amend the PSP cross-section and any intersection layout plans attached to a future Infrastructure Contributions Plan (ICP) to reflect the alternative plans prepared by Cardno (based on previous plans prepared by Traffix Group).

9.2.1 Interim Layout (IN-04)

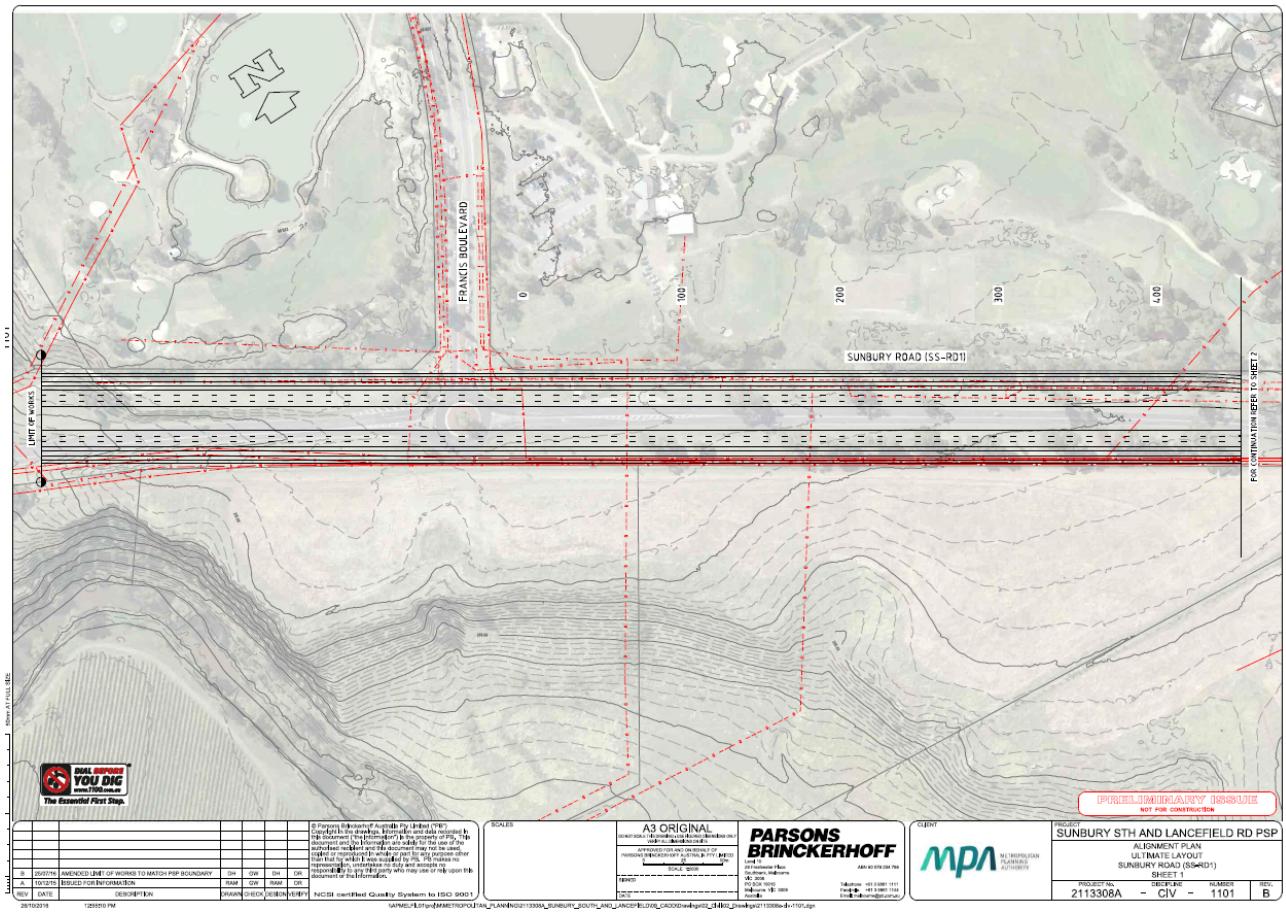
Cardno drawing (V171123-TR-SK-0004) attached as Appendix A3 shows the proposed interim signalised intersection layout for IN-04. The location of this intersection has shifted slightly to the west compared to the exhibited PSP, which should be updated in any future PSP and ICP documentation.

9.3 Sunbury Road / Francis Boulevard Intersection

The exhibited Sunbury South PSP does not include any details on the future of the Sunbury Road / Francis Boulevard intersection that is located near the northern extent of the PSP.

Similarly, the concept ultimate alignment plans prepared by Parsons Brinckerhoff (2113308A-CIV-1101, Rev B) does not show any details of the future intersection as shown in Figure 9-3.

Figure 9-3 Exhibited Concept Ultimate Alignment Plan – Sunbury Road / Francis Boulevard



Francis Boulevard is categorised as a connector street under Hume City Council's Road Register, and provides a north-south connection through Goonawarra Estate.

I am of the opinion that its hierarchy within the local road network would justify the future signalisation of the intersection when Sunbury Road is duplicated by VicRoads (with the signalisation funded by VicRoads as part of the upgrade project).

The concept site layout of Capitol Properties site considers a local street connection to the intersection. Due to the topography of the land, the proposed connection would only serve a relatively small catchment, and as such, the hierarchy of this road could be considered equivalent to a 'local street'. I consider that this connection to the roundabout is highly desirable to provide a reasonable level of connectivity for the residents in the western portion of the site. Without this connection, residents would have to circulate through approximately 1km of local streets to enter / exit the site via the IN-04 intersection.

Given that the proposed local street connection will not be providing a key access point to the broader Sunbury South Precinct, it would seem sensible that the future intersection works are funded by VicRoads as part of the duplication of Sunbury Road, with Capitol Property funding the connection of a forth.

In the event that Sunbury Road were duplicated prior to a fourth leg being constructed to the existing roundabout, then a fourth leg could be constructed to the signalised intersection.

Accordingly, I recommend that:

> Plans 9 (Street Network) and 10 (Public Transport and Path Network) of the exhibited Sunbury South PSP be amended to show a signalised intersection as the ultimate treatment at Sunbury Road / Francis Boulevard;

> Interim access to the existing roundabout be permitted to ensure that the constrained land pocket on the south side of Sunbury Road is able to be developed in an efficient manner; and

> Sunbury Rd / Francis Boulevard should be upgraded to a signalised treatment by VicRoads (and funded by VicRoads) as part of the Sunbury Road duplication project.

9.3.2 Pre-Interim Layout

Cardno drawing number V171123-TR-SK-0005 (attached as Appendix A4) shows the proposed fourth leg of the Francis Boulevard roundabout to provide access into the western portion of the site. The fourth leg of this intersection should be funded by Capitol Property and not form part of the ICP.

In the event that Sunbury Road were duplicated prior to a fourth leg being constructed to the existing roundabout, then a fourth leg could be constructed to the signalised intersection.

9.4 Summary of Access, Intersections and Likely Staging

Table 9-1 Access, Intersection and Staging Summary Table

Item Number	Item Name	Discussion
Item 1: IN-03	Lancefield Road / Sunbury Road Intersection	Stage 1 (initial lots): Use Redstone Hill Road as per existing intersection configuration until Stage 1B can be delivered. Stage 1B: Provide the Pre-Interim intersection treatment Sunbury Road / Lancefield Road. That is the southern leg of the roundabout, see Appendix A1. Stage 1C: Provide the interim signalised intersection (see Appendix A2) once sufficient funds are collected by the ICP.
Item 2: IN-04	Sunbury Road / Northern Connector Road Intersection	Provide an interim signalised intersection for the Northern Connector Street onto Sunbury Road (as seen in Appendix A3). This requires an amendment to PSP plans to show a slight shift to the west for the northern connector.
Item 3	Francis Boulevard / Sunbury Road Intersection	New southern leg to Francis Boulevard to be provided to enable access into the western portion of residential land south of Sunbury Road, see Appendix A4. This requires an amendment to be made to the PSP Street Network Plan (Plan 9) to include this connection.
Item 4	Sunbury Road Cross Section	Shown generally in accordance with the Mesh Plan, with a 10m central median, shared paths on both sides and a wide verge on the southern side to avoid services and maintain existing carriageway. The verge width and median width will vary along the length of Sunbury Road and the adopted cross-section should note these widths as variable. Wire rope safety barriers could be provided along the central median subject to detailed design by VicRoads.
Item 5: RD-04	Southern Boulevard Connector Street	Consideration should be given to placing a Public Acquisition Overlay (PAO) over the entire alignment of the southern connection from Sunbury Road through to Vineyard Road or at least from Sunbury Road through to Fox Hollow Drive to facilitate its early delivery.
Item 6	Sunbury South PSP Plan 9	Amend the exhibited Street Network Plan (PSP Plan 9) to indicate a roundabout at the intersection of the Boulevard Connector / Northern Connector (located to the south-west of IN-03). Also, amend Plan 9 to show a southern connection from the Francis Boulevard roundabout.
Item 7: IN-10	PSP Plans	An amendment to the exhibited Sunbury South PSP plans to show a roundabout at the Southern Connector Street and Fox Hollow Drive intersection instead of traffic signals.

10 Boulevard Connector Street Alignment (RD-04)

Traffix Group previously prepared an alignment plan of RD-04 from Sunbury Road through the Capitol Property land to the Jacksons Creek bridge. It is understood that this alignment is generally agreed upon by the VPA and is reflected in the exhibited PSP document.

I have reviewed the alignment and have noticed that it clips a small portion of Villawood's land where numerous trees exist. I understand that the Villawood land required for the road alignment is not included in PSP Land Use Budget.

Cardno has prepared an alternative alignment to avoid the land acquisition and trees. For a 50 km/h speed limit the radius of the curves would require a small amount of lane widening into the central median to accommodate the path of commercial vehicles, however, overall I am satisfied that the proposed alignment is appropriate. Cardno plan V171123-TR-SK-0007 demonstrating the proposed alignment (with 34 metre cross-section) is attached at Appendix A5.

It is noted that the original alignment prepared by Traffix Group adopted a 31 metre cross-section, whereas the exhibited PSP sets out a 34 metre cross-section for the Boulevard Connector Street. The Cardno alignment plan reflects the exhibited 34 metre reservation width.

11 Conclusions

Based on my review of the exhibited Sunbury South PSP and associated background documents, I am of the opinion that:

Boulevard Connector (RD-04)

> The infrastructure works associated with the alternative route to Calder Freeway (including construction of the southern creek crossing) should occur as part of the Stage 1 Infrastructure Works once sufficient funds are available in the ICP;

> An objective should be included in Section 2.2 of the PSP to recognise the strategic importance of the southern creek crossing and consideration be given to placing a Public Acquisition Overlay (PAO) over the route to ensure the timely delivery of the project;

> The GTA traffic modelling of the 25% development scenario indicates that there is sufficient capacity in the network to accommodate the initial development of the Sunbury South and Lancefield Road Precincts without the bridge crossing and alternative route to Calder Freeway being completed;

> The alignment shown on the Cardno plan attached at Appendix A5 should be adopted;

> The Boulevard Connector / Northern Connector intersection (located to the southwest of IN-03) should be shown as a roundabout on Plan 9 (Street Network) of the PSP;

> Consideration be given to amending the Boulevard Connector / Fox Hollow Drive intersection from signals to a roundabout treatment on Plan 9 (Street Network) of the PSP;

Sunbury Road

> The exhibited Sunbury Road cross-section should be amended to reflect the cross-section prepared by Mesh, with the median and verge widths noted as variable to alleviate the need to produce multiple cross-sections for sections with different constraints;

Sunbury Road / Lancefield Road (IN-03)

> The Sunbury Road / Lancefield Road intersection should be positioned in the located of the existing roundabout as shown in the exhibited PSP to ensure an efficient transition from a 4-leg roundabout (inclusive of pre-interim access) to a signalised intersection;

> The extent of the intersection shown on Plan 13 (Precinct Infrastructure Plan) of the exhibited PSP should be corrected on any subsequent versions of the PSP and future ICP;

> Plan 8 of the exhibited PSP should be updated to reflect the need to remove the trees shown within the road reserve on the south side of the intersection;

Sunbury Road / Northern Connector Street (IN-04)

> The *'Sunbury Infrastructure Co-Ordination & Delivery Strategy (Draft)'* should provide flexibility to include the Sunbury Road / Northern Connector Street intersection as a Stage 1 Infrastructure Priority item, if the third-party land on the south side of the Lancefield Road intersection were unavailable to complete the southern connector link;

> The position of the intersection should be updated in the PSP to reflect the slight shift to the west;

Sunbury Road / Francis Boulevard

> A connection to the Francis Boulevard roundabout should be shown on Plan 9 (Street Network) of the PSP (potentially with an arrow to indicate a local street connection), to ensure a reasonable level of connectivity is provided to the arterial road network for residents in the north-western part of the site;

> Given the hierarchy of Francis Boulevard, it would be reasonable to expect VicRoads to fund and upgrade the existing intersection to a signalised treatment as part of the duplication of Sunbury Road; and

> The connection of a local street to the intersection as a fourth leg should be funded by Capitol Property outside of the future ICP, noting the topography of the land limits access to a relatively small catchment.

Expert Evidence – Traffic and Transport

APPENDIX A

PROPOSED INTERSECTION AND ROAD ALIGNMENT PLANS

Cardno
Shaping the Future

DATE PLOTTED: 9/08/2017 3:13:17 PM BY: User:kevin.shao

CAD File: M:\2017\1001_1500\V171123_Sunbury_South_-_Capitol_Property\Traffic\Drafting\03 Sketches\01 CAD\V171123-TR-SK-0006.dgn

SUNBURY ROAD

LANCEFIELD ROAD

PROPOSED ROAD

PRE-INTERIM INTERSECTION BASED ON TRAFFIX DESIGN REF No. G19950-ALT INTERIM OVERALL.DWG

N

MELWAY MAP REF 383 A9

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CAPITOL PROPERTY GROUP
SUNBURY SOUTH PSP PLANNING PANEL
SUNBURY ROAD/ LANCEFIELD ROAD
CONCEPT LAYOUT PLAN
PRE-INTERIM

Drawn/Check	Date	Scale	Size
KS / CB	08.08.2017	1:1000	A3

Drawing Number	Revision
V171123-TR-SK-0006	1

BY: User:kevin.shao

DATE PLOTTED: 9/08/2017 3:07:49 PM

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LANCEFIELD ROAD

SUNBURY ROAD

4.1m LANE TO BE PROVIDED TO CATER FOR SEMI-TRAILER SWEPT PATH

INTERIM SLIP LANE ARRANGEMENT

ULTIMATE INTERSECTION BY TRAFFIX DESIGN SHOWN IN PURPLE (DASHED) REF No. G19950-A-02.DWG

PROPOSED ROAD

PADDOCK / PASTURE

POST & MESH FENCE

WATER METERS

REDSTONE HILL ROAD

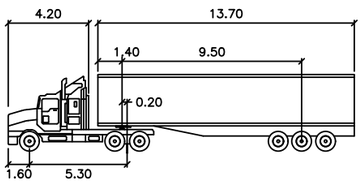
PROPOSED SHARED PATH CONNECTION TO RESERVE

DAM

N

MELWAY MAP REF 383 A9

DESIGN VEHICLE



PM S 19M

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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CAPITOL PROPERTY GROUP
SUNBURY SOUTH PSP PLANNING PANEL
SUNBURY ROAD/ LANCEFIELD ROAD
CONCEPT LAYOUT PLAN
INTERIM TREATMENT

Drawn/Check	Date	Scale	Size
KS / CB	08.08.2017	1:2000	A3

Drawing Number	Revision
V171123-TR-SK-0003	1

BY: User:kevin.shao

DATE PLOTTED: 9/08/2017 3:08:43 PM

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PROPOSED ROAD

SUNBURY ROAD

PROPOSED ROAD

INTERIM INTERSECTION
BASED ON TRAFFIX DESIGN
REF No. G19950-B-00.DWG

N

MELWAY MAP REF 383 A9

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SUNBURY SOUTH PSP PLANNING PANEL
SUNBURY ROAD/ PROPOSED ROAD
CONCEPT LAYOUT PLAN
INTERIM TREATMENT

Drawn/Check	Date	Scale	Size
KS / CB	08.08.2017	1:2000	A3

Drawing Number	Revision
V171123-TR-SK-0004	1

DATE PLOTTED: 9/08/2017 3:09:36 PM BY: User:kevin.shao

CAD File: M:\2017\1001_1500\V171123_Sunbury_South_-_Capitol_Property\Traffic\Drafting\03 Sketches\01 CAD\V171123-TR-SK-0005.dgn

FRANCIS BOULEVARD

SUNBURY ROAD

INTERIM INTERSECTION
BASED ON TRAFFIX DESIGN
REF No. G19950-B-00.DWG

PROPOSED ROAD

N

MELWAY MAP REF 383 A9

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CAPITOL PROPERTY GROUP
SUNBURY SOUTH PSP PLANNING PANEL
SUNBURY ROAD/ FRANCIS BOULEVARD
CONCEPT LAYOUT PLAN
INTERIM TREATMENT

Drawn/Check	Date	Scale	Size
KS / CB	08.08.2017	1:1000	A3

Drawing Number	Revision
V171123-TR-SK-0005	1

REDSTONE HILL ROAD

PROPOSED BOULEVARD CONNECTOR

34.0

PROPOSED ROAD ALIGNMENT
TO AVOID LAND ACQUISITION

TRAFFIX DESIGN SHOWN
IN PURPLE (DASHED)
REF No. G19950-A-02.DWG

N

MELWAY MAP REF 383 A9

Cardno
Shaping the Future

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CAPITOL PROPERTY GROUP
SUNBURY SOUTH PSP PLANNING PANEL
SUNBURY ROAD/ LANCEFIELD ROAD
CONCEPT LAYOUT PLAN
ROAD ALIGNMENT

Drawn/Check	Date	Scale	Size
KS / CB	11.08.2017	1:1000	A3

Drawing Number	Revision
V171123-TR-SK-0007	2